

Abstract

In a response calibration method, a stimulus signal having a non-zero bandwidth is coupled to a receiver through a signal path that introduces distortion to the stimulus signal. The receiver acquires a first digital representation of the stimulus signal at an output of the signal path with the receiver adjusted to a first spectral position, and acquires a second digital representation of the stimulus signal at the output of the signal path with the receiver adjusted to a second spectral position that is shifted from the first spectral position by a predetermined frequency offset. The frequency response of the receiver when the receiver adjusted to the first spectral position is equated to the frequency response of the receiver when the receiver is adjusted to the second spectral position. A first combined frequency response of the receiver and the signal path is extracted at three or more designated frequencies within the bandwidth of the stimulus signal, and a second combined frequency response of the receiver and signal path is extracted at a set of frequencies offset from the three or more designated frequencies by the predetermined frequency offset. The frequency response of the receiver is determined from the first combined frequency response and the second combined frequency response. The frequency response of the signal path is optionally determined according to the response calibration method under condition that the stimulus signal is known, characterized, designated or otherwise established.